ABSTRACT OF THE DISCLOSURE

A multidirectional inertial device having a plurality of preferential detection axes includes: inertial sensors, sensitive to accelerations in a direction parallel to the preferential detection axes; transduction stages, which are coupled to the inertial sensors and supply a plurality of acceleration signals, each of which is correlated to an acceleration parallel to a respective preferential detection axis; a first comparison circuit, which is connected to the transduction stages and supplies a pre-set logic value when at least one of the acceleration signals is greater than a respective upper threshold; and a second comparison circuit, connected to the transduction stages and to the first comparison circuit for supplying the pre-set logic value when each of the acceleration signals is greater than a respective lower threshold, which is smaller than the respective upper threshold.